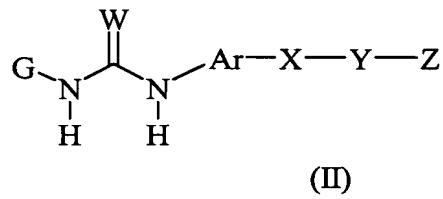


LISTING OF CLAIMS

Claim 1 (currently amended): A compound of the formula (II):



wherein:

G is:

phenyl, naphthyl, benzocyclobutanyl, dihydronaphthyl, tetrahydronaphthyl, benzocycloheptanyl, benzocycloheptenyl, indanyl, indenyl;

~~pyridinyl, pyridonyl, quinolinyl, dihydroquinolinyl, tetrahydroquinoyl, isoquinolinyl, tetrahydroisoquinoyl, pyridazinyl, pyrimidinyl, pyrazinyl, benzimidazolyl, benzthiazolyl, benzoxazolyl, benzofuranyl, benzothiophenyl, benzpyrazolyl, dihydrobenzofuranyl, dihydrobenzothiophenyl, benzoxazolonyl, benzo[1,4]oxazin-3-onyl, benzodioxolyl, benzo[1,3]dioxol-2-onyl, benzofuran-3-onyl, tetrahydrobenzopyranyl, indolyl, indoliny, indolonyl, indolinonyl, phthalimidyl, chromoyl;~~

~~oxetanyl, tetrahydrofuranyl, tetrahydrothiophenyl, piperidinyl, piperazinyl, morpholinyl, tetrahydropyranyl, dioxanyl, tetramethylene sulfonyl, tetramethylene sulfoxidyl, oxazolinyl, thiazolinyl, imidazolinyl, tetrahydropyridinyl, homopiperidinyl, pyrrolinyl, tetrahydropyrimidinyl, decahydroquinolinyl, decahydroisoquinolinyl, thiomorpholinyl, thiazolidinyl, dihydrooxazinyl, dihydropyranyl, oxocanyl, heptacanyl, thioxanyl or dithianyl;~~
 wherein G is substituted by one or more R₁, R₂ or R₃;

Ar is:

phenyl, naphthyl, ~~quinolinyl, isoquinolinyl, tetrahydronaphthyl, tetrahydroquinolinyl, tetrahydroisoquinolinyl, benzimidazolyl, benzofuranyl, dihydrobenzofuranyl, indoliny,~~

~~benzothienyl, dihydrobenzothienyl, indanyl or indenyl~~ each being optionally substituted by one or more R₄ or R₅;

X is:

~~a C₅₋₈ cycloalkyl or cycloalkenyl optionally substituted with one to two oxo groups or one to three C₁₋₄ alkyl, C₁₋₄ alkoxy or C₁₋₄ alkylamino chains;~~

~~phenyl, furanyl, thieryl, pyrrolyl, pyrazolyl, imidazolyl, pyridinyl, pyrimidinyl, pyridinonyl, dihydropyridinonyl, maleimidyl, dihydromaleimidyl, piperdanyl, benzimidazole, 3H-imidazo[4,5-b]pyridine, piperazinyl, pyridazinyl or pyrazinyl;~~

Y is:

a bond or a C₁₋₄ saturated or unsaturated branched or unbranched carbon chain optionally partially or fully halogenated, wherein one or more methylene groups are optionally replaced by O, N, or S(O)_m and wherein Y is optionally independently substituted with one to two oxo groups, phenyl or one or more C₁₋₄ alkyl optionally substituted by one or more halogen atoms;

Z is:

halogen, C₁₋₄ alkyl, nitrile, amino, hydroxy, C₁₋₆ alkoxy, NH₂C(O), mono- or di(C₁₋₃alkyl) aminocarbonyl, mono- or di(C₁₋₃alkyl)amino, secondary or tertiary amine wherein the amino nitrogen is covalently bonded to C₁₋₃ alkyl or C₁₋₅ alkoxyalkyl, pyridinyl-C₁₋₃ alkyl, imidazolyl-C₁₋₃ alkyl, tetrahydrofuranyl-C₁₋₃ alkyl, nitrile-C₁₋₃ alkyl, carboxamide-C₁₋₃ alkyl, phenyl, wherein the phenyl ring is optionally substituted with one to two halogen, C₁₋₆ alkoxy, hydroxy or mono- or di-(C₁₋₃ alkyl)amino, C₁₋₆ alkyl-S(O)_m, or phenyl-S(O)_m, wherein the phenyl ring is optionally substituted with one to two halogen, C₁₋₆ alkoxy, hydroxy, halogen or mono- or di-(C₁₋₃ alkyl)amino;

C₁₋₆ alkyl-S(O)_m, and phenyl-S(O)_m, wherein the phenyl ring is optionally substituted with one to two halogen, C₁₋₆ alkoxy, hydroxy or mono- or di-(C₁₋₃ alkyl)amino;

each R₁ is independently:

C_{1-10} alkyl optionally be partially or fully halogenated, and optionally substituted with one to three C_{3-10} cycloalkanyl, hydroxy, phenyl, naphthyl, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrrolyl, imidazolyl, pyrazolyl, thienyl, furyl, isoxazolyl or isothiazolyl; each of the aforementioned being optionally substituted with one to five groups selected from halogen, C_{1-6} alkyl which is optionally partially or fully halogenated, C_{3-8} cycloalkanyl, C_{5-8} cycloalkenyl, hydroxy, nitrile, C_{1-3} alkoxy which is optionally partially or fully halogenated or $NH_2C(O)$, mono- or di(C_{1-3} alkyl)amino, and mono- or di(C_{1-3} alkyl)aminocarbonyl;

cyclopropyloxy, cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, or cycloheptyloxy each being optionally partially or fully halogenated and optionally substituted with one to three C_{1-3} alkyl groups optionally partially or fully halogenated, CN, hydroxy C_{1-3} alkyl or aryl; or an analog of such cycloalkyl group wherein one to three ring methylene groups are independently replaced by O, $S(O)_m$, CHOH, $>C=O$, $>C=S$ or NH;

phenyloxy or benzyloxy each being optionally partially or fully halogenated and optionally substituted with one to three C_{1-3} alkyl groups optionally partially or fully halogenated, CN, hydroxy C_{1-3} alkyl or aryl; or an analog of such cycloaryl group wherein one to two ring methyne groups are independently replaced by N;

cyclopropanyl, cyclobutanyl, cyclopentanyl, cyclohexanyl, cycloheptanyl, bicyclopentanyl, bicyclohexanyl or bicycloheptanyl, each being optionally partially or fully halogenated and optionally substituted with one to three C_{1-3} alkyl optionally partially or fully halogenated, CN, hydroxy C_{1-3} alkyl or aryl; or an analog of such cycloalkyl group wherein one to three ring methylene groups are independently replaced by O, $S(O)_m$, CHOH, $>C=O$, $>C=S$ or NH;

C_{3-10} branched or unbranced alkenyl each being optionally partially or fully halogenated, and optionally substituted with one to three C_{1-5} branched or unbranced alkyl, phenyl, naphthyl, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrrolyl, imidazolyl, pyrazolyl, thienyl, furyl, isoxazolyl or isothiazolyl, each of the aforementioned being substituted with one to five halogen, C_{1-6} alkyl which is optionally partially or fully halogenated, cyclopropanyl, cyclobutanyl, cyclopentanyl, cyclohexanyl, cycloheptanyl, bicyclopentanyl, bicyclohexanyl and bicycloheptanyl, hydroxy, nitrile, C_{1-3} alkoxy which is optionally partially or fully halogenated, $NH_2C(O)$, mono- or di(C_{1-3} alkyl)aminocarbonyl; the C_{3-10} branched or

unbranched alkenyl being optionally interrupted by one or more heteroatoms chosen from O, N and S(O)_m;

cyclopentenyl, cyclohexenyl, cyclohexadienyl, cycloheptenyl, cycloheptadienyl, bicyclohexenyl or bicycloheptenyl, wherein such cycloalkenyl group is optionally substituted with one to three C₁₋₃ alkyl groups;

nitrile, halogen;

methoxycarbonyl, ethoxycarbonyl and propoxycarbonyl;

silyl containing three C₁₋₄ alkyl groups optionally partially or fully halogenated;

C₃₋₆ alkynyl branched or unbranched carbon chain optionally partially or fully halogenated, wherein one or more methylene groups are optionally replaced by O, NH or S(O)_m and wherein said alkynyl group is optionally independently substituted with one to two oxo groups, pyrroldinyl, pyrrolyl, one or more C₁₋₄ alkyl optionally substituted by one or more halogen atoms, nitrile, morpholino, piperidinyl, piperazinyl, imidazolyl, phenyl, pyridinyl, tetrazolyl, or mono- or di(C₁₋₃alkyl)amino optionally substituted by one or more halogen atoms;

each R₂, R₄, and R₅ is

a C₁₋₆ branched or unbranched alkyl optionally partially or fully halogenated, acetyl, aroyl, C₁₋₄ branched or unbranched alkoxy, each being optionally partially or fully halogenated, halogen, methoxycarbonyl, C₁₋₃ alkyl-S(O)_m optionally partially or fully halogenated, or phenylsulfonyl;

C₁₋₆ alkoxy, hydroxy, amino, or mono- or di-(C₁₋₄ alkyl)amino, nitrile, halogen;

OR₆;

nitro; or

mono- or di-(C₁₋₄ alkyl)amino-S(O)₂ optionally partially or fully halogenated, or H₂NSO₂;

each R₃ is independently:

phenyl, naphthyl, morpholinyl, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrrolyl, pyrrolidinyl, imidazolyl, pyrazolyl, thiazolyl, oxazolyl, triazolyl, tetrazolyl, thienyl, furyl, tetrahydrofuryl, isoxazolyl, isothiazolyl, quinolinyl, isoquinolinyl, indolyl, benzimidazolyl, benzofuranyl, benzoxazolyl, benzisoxazolyl, benzpyrazolyl, benzothiophenyl, cinnolinyl, pterindinyl, phthalazinyl, naphthypyridinyl, quinoxalinyl, quinazolinyl, purinyl or indazolyl, each of the aforementioned is optionally substituted with one to three phenyl, naphthyl, heterocycle or heteroaryl as hereinabove described in this paragraph, C₁₋₆ branched or unbranched alkyl which is optionally partially or fully halogenated, cyclopropanyl, cyclobutanyl, cyclopentanyl, cyclohexanyl, cycloheptanyl, bicyclopentanyl, bicyclohexanyl, bicycloheptanyl, phenyl C₁₋₅ alkyl, naphthyl C₁₋₅ alkyl, halogen, hydroxy, oxo, nitrile, C₁₋₃ alkyloxy optionally partially or fully halogenated, phenoxy, naphthoxy, heteroaryloxy or heterocyclicoxy wherein the heterocyclic or heteroaryl moiety is as hereinabove described in this paragraph, nitro, amino, mono- or di-(C₁₋₃alkyl)amino, phenylamino, naphthylamino, heteroaryl or heterocyclic amino wherein the heteroaryl heterocyclic moiety is as hereinabove described in this paragraph, NH₂C(O), a mono- or di-(C₁₋₃alkyl) aminocarbonyl, C₁₋₅ alkyl-C(O)-C₁₋₄ alkyl, amino-C₁₋₅ alkyl, mono- or di-(C₁₋₃alkyl)amino-C₁₋₅ alkyl, amino-S(O)₂, di-(C₁₋₃alkyl)amino-S(O)₂, R₇-C₁₋₅ alkyl, R₈-C₁₋₅ alkoxy, R₉-C(O)-C₁₋₅ alkyl, R₁₀-C₁₋₅ alkyl(R₁₁)N, carboxy-mono- or di-(C₁₋₅alkyl)-amino;

a fused aryl selected from benzocyclobutanyl, indanyl, indenyl, dihydronaphthyl, tetrahydronaphthyl, benzocycloheptanyl and benzocycloheptenyl, or a fused heteroaryl selected from cyclopentenopyridinyl, cyclohexanopyridinyl, cyclopentanopyrimidinyl, cyclohexanopyrimidinyl, cyclopentanopyrazinyl, cyclohexanopyrazinyl, cyclopentanopyridazinyl, cyclohexanopyridazinyl, cyclopentanoquinolinyl, cyclohexanoquinolinyl, cyclopentanoisoquinolinyl, cyclohexanoisoquinolinyl, cyclopentanoindolyl, cyclohexanoindolyl, cyclopentanobenzimidazolyl, cyclohexanobenzimidazolyl, cyclopentanobenzoxazolyl, cyclohexanobenzoxazolyl, cyclopentanoimidazolyl, cyclohexanoimidazolyl, cyclopentanothienyl and

cyclohexanothienyl; wherein the fused aryl or fused heteroaryl ring is independently substituted with zero to three phenyl, naphthyl, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrrolyl, imidazolyl, pyrazolyl, thienyl, furyl, isoxazolyl, isothiazolyl, C_{1-6} alkyl which is optionally partially or fully halogenated, halogen, nitrile, C_{1-3} alkyloxy which is optionally partially or fully halogenated, phenoxy, naphthoxy, heteroaryloxy or heterocyclicoxy wherein the heteroaryl or heterocyclic moiety is as hereinabove described in this paragraph, nitro, amino, mono- or di- $(C_{1-3}\text{alkyl})$ amino, phenylamino, naphthylamino, heteroaryl or heterocyclic amino wherein the heteroaryl or heterocyclic moiety is as hereinabove described in this paragraph, $\text{NH}_2\text{C(O)}$, mono- or di- $(C_{1-3}\text{alkyl})$ aminocarbonyl, C_{1-4} alkyl- OC(O) , C_{1-5} alkyl- C(O)-C_{1-4} alkyl, amino- C_{1-5} alkyl, mono- or di- (C_{1-3}) alkylamino- C_{1-5} alkyl, $R_{12}\text{-}C_{1-5}$ alkyl, $R_{13}\text{-}C_{1-5}$ alkoxy, $R_{14}\text{-C(O)-}C_{1-5}$ alkyl or $R_{15}\text{-}C_{1-5}$ alkyl($R_{16}\text{)N}$;

cyclopropanyl, cyclobutanyl, cyclopentanyl, cyclohexanyl, cycloheptanyl, bicyclopentanyl, bicyclohexanyl or bicycloheptanyl, each being optionally be partially or fully halogenated and optionally substituted with one to three C_{1-3} alkyl groups, or an analog of such cycloalkyl group wherein one to three ring methylene groups are independently replaced by O, S, CHOH , $>\text{C=O}$, $>\text{C=S}$ or NH;

cyclopentenyl, cyclohexenyl, cyclohexadienyl, cycloheptenyl, cycloheptadienyl, bicyclohexenyl or bicycloheptenyl, each optionally substituted with one to three C_{1-3} alkyl groups;

C_{1-4} alkyl-phenyl- $\text{C(O)-}C_{1-4}$ alkyl-, C_{1-4} alkyl- $\text{C(O)-}C_{1-4}$ alkyl- or C_{1-4} alkyl-phenyl- $\text{S(O)}_m\text{-}C_{1-4}$ alkyl-;

C_{1-6} alkyl or C_{1-6} branched or unbranched alkoxy each of which is optionally partially or fully halogenated or optionally substituted with R_{17} ;

OR_{18} or C_{1-6} alkyl optionally substituted with OR_{18} ;

amino or mono- or di- $(C_{1-5}\text{alkyl})$ amino optionally substituted with R_{19} ;

$R_{20}\text{C(O)N(R}_{21}\text{)-, }R_{22}\text{O- or }R_{23}R_{24}\text{NC(O)-; }R_{26}(\text{CH}_2)_m\text{C(O)N(R}_{21}\text{)- or }R_{26}\text{C(O)(CH}_2)_m\text{N(R}_{21}\text{)-;}$

C₂₋₆alkenyl substituted by R₂₃R₂₄NC(O)-;

C₂₋₆ alkynyl branched or unbranched carbon chain, optionally partially or fully halogenated, wherein one or more methylene groups are optionally replaced by O, NH, S(O)_m and wherein said alkynyl group is optionally independently substituted with one to two oxo groups, pyrroldinyl, pyrrolyl, morpholinyl, piperidinyl, piperazinyl, imidazolyl, phenyl, pyridinyl, tetrazolyl one or more C₁₋₄ alkyl optionally substituted by one or more halogen atoms, nitrile, morpholino, piperidinyl, piperazinyl, imidazolyl, phenyl, pyridinyl, tetrazolyl, or mono- or di(C₁₋₄ alkyl)amino which may be substituted by one or more halogen atoms; or aroyl;

R₆ is a:

C₁₋₄ alkyl optionally partially or fully halogenated and optionally substituted with R₂₆;

each R₇, R₈, R₉, R₁₀, R₁₂, R₁₃, R₁₄, R₁₅, R₁₇, R₁₉, R₂₅ and R₂₆ is independently: nitrile, phenyl, morpholino, piperidinyl, piperazinyl, imidazolyl, pyridinyl, tetrazolyl, amino or mono- or di-(C₁₋₄alkyl)amino optionally partially or fully halogenated;

each R₁₁ and R₁₆ is independently:
hydrogen or C₁₋₄ alkyl optionally partially or fully halogenated;

R₁₈ is independently:
hydrogen or a C₁₋₄ alkyl optionally independently substituted with oxo or R₂₅;

R₂₀ is independently:
C₁₋₁₀ alkyl optionally partially or fully halogenated, phenyl, or pyridinyl;

R₂₁ is independently:
hydrogen or C₁₋₃ alkyl optionally partially or fully halogenated;

each R₂₂, R₂₃ and R₂₄ is independently:

hydrogen, C₁₋₆ alkyl optionally partially or fully halogenated, said C₁₋₆ alkyl is optionally interrupted by one or more O, N or S, said C₁₋₆ alkyl also being independently optionally substituted by mono- or di-(C₁₋₃alkyl)aminocarbonyl, phenyl, pyridinyl, amino or mono- or di-(C₁₋₄alkyl)amino each of which is optionally partially or fully halogenated and optionally substituted with mono- or di-(C₁₋₃alkyl)amino;
or R₂₃ and R₂₄ taken together optionally form a heterocyclic or heteroaryl ring;

m = 0, 1 or 2;

W is O or S and

pharmaceutically acceptable derivatives thereof.

Claim 2 (currently amended): The compound according to claim 1 wherein

G is phenyl, pyridinyl, pyridonyl, naphthyl, quinolinyl, isoquinolinyl, pyrazinyl, benzimidazolyl, benzoxazolyl, benzofuranyl, benzothiophenyl, benzpyrazolyl, dihydrobenzofuranyl, dihydrobenzothiophenyl, or indanyl, indenyl, indolyl, indolinyl, indolonyl or indolinonyl, wherein G is substituted by one or more R₁, R₂ or R₃;

Ar is:

naphthyl, quinolinyl, isoquinolinyl, tetrahydronaphthyl, tetrahydroquinolinyl, tetrahydroisoquinolinyl, indanyl or, indenyl or indolyl each being optionally substituted by one or more R₄ or R₅ groups;

X is:

phenyl, furanyl, thienyl, pyrrolyl, pyrazolyl, imidazolyl, pyridinyl, pyrimidinyl, pyridinonyl, dihydropyridinonyl, maleimidyl, dihydromaleimidyl, piperdanyl, piperazinyl, pyridazinyl or pyrazinyl;

Y is:

a bond or

a C₁₋₄ saturated or unsaturated carbon chain wherein one of the carbon atoms is optionally replaced by O, N, or S(O)_m and wherein Y is optionally independently substituted with one to two oxo groups, phenyl or one or more C₁₋₄ alkyl optionally substituted by one or more halogen atoms;

Z is:

nitrile, C₁₋₆ alkyl-S(O)_m, halogen, hydroxy, C₁₋₄ alkoxy, amino, mono- or di-(C₁₋₆ alkyl)amino, mono- or di-(C₁₋₃ alkyl)aminocarbonyl, or NH₂C(O);

each R₁ is independently:

C₃₋₆ alkyl optionally partially or fully halogenated, and optionally substituted with one to three C₃₋₆cycloalkyl, phenyl, thienyl, furyl, isoxazolyl or isothiazolyl; each of the aforementioned being optionally substituted with one to three groups selected from halogen, C₁₋₃ alkyl which is optionally partially or fully halogenated, hydroxy, nitrile or C₁₋₃alkoxy which is optionally partially or fully halogenated;

cyclopropyl, cyclobutyl, cyclopentanyl, cyclohexanyl, bicyclopentanyl or bicyclohexanyl, each being optionally partially or fully halogenated and optionally substituted with one to three C₁₋₃ alkyl groups optionally partially or fully halogenated, CN, hydroxyC₁₋₃alkyl or phenyl; or an analog of such cycloalkyl group wherein one to three ring methylene groups are independently replaced by O, S, CHO_H, >C=O, >C=S or NH; or

silyl containing three C₁₋₄ alkyl groups optionally partially or fully halogenated;

R₂ is independently:

halogen, C₁₋₃ alkoxy, C₁₋₃ alkyl-S(O)_m optionally partially or fully halogenated, phenylsulfonyl or nitrile;

R₃ is independently:

phenyl, morpholino, pyridinyl, pyrimidinyl, pyrazinyl, pyrrolyl, pyrrolylidinyl, imidazolyl, pyrazolyl, each being optionally substituted with one to three phenyl, naphthyl, heterocycle or heteroaryl as hereinabove described in this paragraph, C₁₋₆ alkyl which is optionally partially or fully halogenated, cyclopropanyl, cyclobutanyl, cyclopentanyl, cyclohexanyl, cycloheptanyl, bicyclopentanyl, bicyclohexanyl, bicycloheptanyl, phenyl C₁₋₅ alkyl, naphthyl C₁₋₅ alkyl, halogen, oxo, hydroxy, nitrile, C₁₋₃ alkyloxy optionally partially or fully halogenated, phenyloxy, naphthyoxy, heteroaryloxy or heterocyclicoxy wherein the heteroaryl or heterocyclic moiety is as hereinabove described in this paragraph, nitro, amino, mono- or di-(C₁₋₃alkyl)amino, phenylamino, naphthylamino, heteroaryl or heterocyclic amino wherein the heteroaryl or heterocyclic moiety is as hereinabove described in this paragraph, NH₂C(O), a mono- or di-(C₁₋₃alkyl)aminocarbonyl, C₁₋₅ alkyl-C(O)-C₁₋₄ alkyl, mono- or di-(C₁₋₃alkyl)amino, mono- or di-(C₁₋₃)alkylamino-C₁₋₅ alkyl, mono- or di-(C₁₋₃alkyl)amino-S(O)₂, R₇-C₁₋₅ alkyl, R₈-C₁₋₅ alkoxy, R₉-C(O)-C₁₋₅ alkyl, R₁₀-C₁₋₅ alkyl(R₁₁)N, carboxy-mono- or di-(C₁₋₅)-alkyl-amino;

C₁₋₃ alkyl or C₁₋₄ alkoxy each being optionally partially or fully halogenated or optionally substituted with R₁₇;

OR₁₈ or C₁₋₆ alkyl optionally substituted with OR₁₈;

amino or mono- or di- (C₁₋₅ alkyl)amino optionally substituted with R₁₉;

R₂₀C(O)N(R₂₁)-, R₂₂O- ; R₂₃R₂₄NC(O)-; R₂₆CH₂C(O)N(R₂₁)- or R₂₆C(O)CH₂N(R₂₁)-; C₂₋₄alkenyl substituted by R₂₃R₂₄NC(O)-; or

C₂₋₄ alkynyl branched or unbranched carbon chain optionally partially or fully halogenated and optionally independently substituted with one to two oxo groups, pyrroldinyl, pyrrolyl, morpholinyl, piperidinyl, piperazinyl, imidazolyl, phenyl, pyridinyl, tetrazolyl or one or more C₁₋₄ alkyl optionally substituted by one or more halogen atoms; and R₂₃ and R₂₄ taken together optionally form imidazolyl, piperidinyl, morpholinyl, piperazinyl or a pyridinyl ring.

Claim 3 (currently amended): The compound according to claim 2 wherein:

G is phenyl, ~~pyridinyl, pyridonyl, naphthyl or ,quinolinyl, isoquinolinyl, pyrazinyl, benzothiophenyl, dihydrobenzofuranyl, dihydrobenzothiophenyl, indanyl, indolyl, indolinyl, indolonyl or indolinonyl~~, wherein G is substituted by one or more R₁, R₂ or R₃;

Ar is naphthyl;

X is

~~phenyl, imidazolyl, pyridinyl, pyrimidinyl, piperdanyl, piperazinyl, pyridazinyl or pyrazinyl each being optionally independently substituted with one to three C₁₋₄ alkyl, C₁₋₄ alkoxy, hydroxy, nitrile, amino, mono or di (C₁₋₃ alkyl)amino, mono or di (C₁₋₃ alkylamino)carbonyl, NH₂C(O), C₁₋₆ alkyl S(O)_m or halogen;~~

Y is:

a bond or

a C₁₋₄ saturated carbon chain wherein one of the carbon atoms is optionally replaced by O, N or S and wherein Y is optionally independently substituted with an oxo group;

Z is:

C₁₋₃ alkoxy;

each R₁ is independently:

C₃₋₅ alkyl optionally partially or fully halogenated, and optionally substituted with phenyl substituted with zero to three halogen, C₁₋₃ alkyl which is optionally partially or fully halogenated, hydroxy, nitrile or C₁₋₃alkoxy which is optionally partially or fully halogenated;

cyclopropyl, cyclobutyl, cyclopentanyl, cyclohexanyl, bicyclopentanyl or bicyclohexanyl, each being optionally partially or fully halogenated and optionally substituted with one to three C₁₋₃ alkyl groups optionally partially or fully halogenated, CN, hydroxyC₁₋₃alkyl or

phenyl; and an analog of cyclopropyl, cyclobutyl, cyclopentanyl, cyclohexanyl, bicyclopentanyl or bicyclohexanyl wherein one ring methylene group is replaced by O; and

silyl containing three C₁₋₂ independently alkyl groups optionally partially or fully halogenated;

each R₂ is independently:

bromo, chloro, fluoro, methoxy, methylsulfonyl or nitrile;

each R₃ is independently:

phenyl, morpholino, pyridinyl, pyrimidinyl, pyrrolylidinyl, 2,5-pyrrolidin-dionyl, imidazolyl, pyrazolyl, each of the aforementioned is optionally substituted with one to three C₁₋₃ alkyl which is optionally partially or fully halogenated, halogen, oxo, hydroxy, nitrile and C₁₋₃ alkyloxy optionally partially or fully halogenated;

C₁₋₃ alkyl or C₁₋₃ alkoxy optionally partially or fully halogenated or optionally substituted with R₁₇;

OR₁₈ or C₁₋₃ alkyl optionally substituted with OR₁₈;

amino or mono- or di-(C₁₋₃ alkyl)amino optionally substituted with R₁₉;

R₂₀C(O)N(R₂₁)-, R₂₂O- ; R₂₃R₂₄NC(O)-; R₂₆CH₂C(O)N(R₂₁)- or R₂₆C(O)CH₂N(R₂₁)-;

C₂₋₄ alkenyl substituted by R₂₃R₂₄NC(O)-; or

C₂₋₄ alkynyl substituted with pyrroldinyl or pyrrolyl;

and

R₂₃ and R₂₄ taken together optionally form morpholino.

Claim 4 (currently amended): The compound according to claim 3 wherein

~~G is phenyl, pyridinyl, pyridonyl, naphthyl, quinolinyl, isoquinolinyl, dihydrobenzofuranyl, indanyl, indolinyl, indolonyl, or indolinonyl, wherein G is substituted by one or more R₁, R₂ or R₃;~~

Ar is 1-naphthyl;

X is:

phenyl, imidazolyl, pyridinyl, pyrimidinyl, piperdanyl, piperazinyl, pyridazinyl or pyrazinyl;

Y is:

a bond or

-CH₂-, -CH₂CH₂-, -C(O)-, -O-, -S-, -NH-CH₂CH₂CH₂- , -N(CH₃)-, or -NH-;

each R₁ is independently:

C₃₋₅ alkyl optionally partially or fully halogenated, and optionally substituted with phenyl;

cyclopropyl, cyclopentanyl, cyclohexanyl and bicyclopentanyl optionally substituted with one to three methyl groups optionally partially or fully halogenated, CN, hydroxymethyl or phenyl; or 2-tetrahydrofuranyl substituted by methyl; or trimethyl silyl;

each R₃ is independently:

phenyl, morpholinyl, pyridinyl, pyrimidinyl, pyrrolylidinyl, 2,5-pyrrolidin-dionyl, imidazolyl or pyrazolyl, wherein any of the aforementioned is optionally substituted with C₁₋₂ alkyl which is optionally partially or fully halogenated;

C₁₋₃ alkyl or C₁₋₃ alkoxy each being optionally partially or fully halogenated or optionally substituted with diethylamino;

OR₁₈ or C₁₋₃ alkyl optionally substituted with OR₁₈;

amino or mono- or di-(C₁₋₃ alkyl)amino optionally substituted with R₁₉;

CH₃C(O)NH-, R₂₂O- ; R₂₃R₂₄NC(O)-; R₂₆CH₂C(O)N(R₂₁)- or R₂₆C(O)CH₂N(R₂₁)-;

C₂₋₄alkenyl substituted by R₂₃R₂₄NC(O)-; or

C₂₋₄ alkynyl substituted with pyrroldinyl or pyrrolyl;

R₂₃ and R₂₄ are H or R₂₃ and R₂₄ taken together optionally form morpholino; and R₂₆ is morpholino.

Claim 5 (currently amended): The compound according to claim 4 wherein

G is

phenyl, pyridinyl or naphthyl wherein G is substituted by one or more R₁, R₂ or R₃;

X is:

imidazolyl or pyridinyl;

Y is:

-CH₂-, -NH-CH₂CH₂CH₂- or -NH-;

each R₁ is independently:

tert-butyl, sec-butyl, tert-amyl or phenyl;

R₂ is chloro;

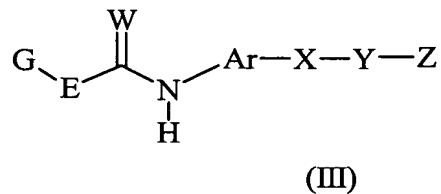
R₃ is independently:

methyl, methoxy, methoxymethyl, hydroxypropyl, acetamide, morpholino or morpholinocarbonyl.

Claim 6 (original): The compound according to claim 5 wherein X is pyridinyl.

Claim 7 (original): The compound according to claim 6 wherein the pyridinyl is attached to Ar via the 3-pyridinyl position.

Claim 8 (currently amended): A compound of the formula (III):



wherein:

E is -NH-;

G is:

phenyl, naphthyl, benzocyclobutanyl, dihydronaphthyl, tetrahydronaphthyl,
benzocycloheptanyl, benzocycloheptenyl, indanyl, indenyl;
~~pyridinyl, pyridonyl, quinolinyl, dihydroquinolinyl, tetrahydroquinoyl, isoquinolinyl, tetrahydroisoquinoyl, pyridazinyl, pyrimidinyl, pyrazinyl, benzimidazolyl, benzthiazolyl, benzooxazolyl, benzofuranyl, benzothiophenyl, benzpyrazolyl, dihydrobenzofuranyl, dibenzofuranyl, dihydrobenzothiophenyl, benzooxazolonyl, benzo[1,4]oxazin-3-onyl, benzodioxolyl, benzo[1,3]dioxol-2-onyl, benzofuran-3-onyl, tetrahydrobenzopyran-3-onyl, indolyl, 2,3-dihydro-1H-indolyl, indolinyl, indolonyl, indolinonyl, phthalimidyl, oxetanyl, tetrahydrothiophenyl, piperidinyl, piperazinyl, morpholino, tetrahydropyran-3-onyl, 3,4-dihydro-2H-benzo[1,4]oxazinyl, tetrahydropyridinyl, homopiperidinyl, pyrrolinyl, tetrahydropyrimidinyl, decahydroquinolinyl, decahydroisoquinolinyl, thiomorpholino, dihydropyranyl, oxocanyl or heptacanyl;~~
wherein G is optionally substituted by one or more R₁, R₂ or R₃;

Ar is:

phenyl, naphthyl, ~~quinolinyl, isoquinolinyl, tetrahydronaphthyl, tetrahydroquinolinyl, tetrahydroisoquinolinyl, benzimidazolyl, benzofuranyl, dihydrobenzofuranyl, indolinyl, benzothienyl, dihydrobenzothienyl, indanyl~~; or indenyl ~~or indolyl~~ each being optionally substituted by one or more R₄ or R₅;

X is:

~~a C₅₋₈ cycloalkyl or cycloalkenyl optionally substituted with one to two oxo groups or one to three C₁₋₄ alkyl, C₁₋₄ alkoxy or C₁₋₄ alkylamino chains each being branched or unbranched;~~

~~aryl, furanyl, thieryl, pyrrolyl, pyrazolyl, imidazolyl, pyridinyl, pyrimidinyl, pyridinonyl, dihydropyridinonyl, maleimidyl, dihydromaleimidyl, piperdanyl, benzimidazole, 3H-imidazo[4,5-b]pyridine, piperazinyl, pyridazinyl or pyrazinyl; each being optionally independently substituted with one to three C₁₋₄ alkyl, C₁₋₄ alkoxy, hydroxy, nitrile, amino, mono- or di-(C₁₋₃ alkyl)amino, mono- or di-(C₁₋₃ alkylamino)carbonyl, NH₂C(O), C₁₋₆ alkyl-S(O)_m or halogen;~~

Y is:

a bond or a C₁₋₄ saturated or unsaturated branched or unbranched carbon chain optionally partially or fully halogenated, wherein one or more C atoms are optionally replaced by O, N, or S(O)_m and wherein Y is optionally independently substituted with one to two oxo groups, nitrile, phenyl or one or more C₁₋₄ alkyl optionally substituted by one or more halogen atoms;

Z is:

hydroxy, halogen, nitrile, amino wherein the N atom is optionally independently mono- or di-substituted by C₁₋₃acyl, C₁₋₆alkyl or C₁₋₃alkoxyC₁₋₃alkyl, C₁₋₆alkyl branched or unbranched, C₁₋₆alkoxy, C₁₋₃acylamino, nitrileC₁₋₄alkyl, C₁₋₆ alkyl-S(O)_m, and phenyl-S(O)_m, wherein the phenyl ring is optionally substituted with one to two halogen, C₁₋₆ alkoxy, hydroxy or mono- or di-(C₁₋₃ alkyl)amino;

each R₁ is independently:

C_{1-10} alkyl branched or unbranched optionally partially or fully halogenated, wherein one or more C atoms are optionally independently replaced by O, N or $S(O)_m$, and wherein said C_{1-10} alkyl is optionally substituted with one to three C_{3-10} cycloalkyl, hydroxy, oxo, phenyl, naphthyl, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrrolyl, pyrrolidinyl, imidazolyl, pyrazolyl, thienyl, furyl, dioxolanyl, isoxazolyl or isothiazolyl; each of the aforementioned being optionally substituted with one to five groups selected from halogen, C_{1-6} alkyl which is optionally partially or fully halogenated, C_{3-8} cycloalkanyl, C_{5-8} cycloalkenyl, hydroxy, nitrile, C_{1-3} alkoxy which is optionally partially or fully halogenated, $NH_2C(O)$, mono- or di(C_{1-3} alkyl)amino, and mono- or di(C_{1-3} alkyl)aminocarbonyl;

or R_1 is

cyclopropyloxy, cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, or cycloheptyloxy each being optionally partially or fully halogenated and optionally substituted with one to three C_{1-3} alkyl groups optionally partially or fully halogenated, nitrile, hydroxy C_{1-3} alkyl or aryl; or an analog of such cycloalkyl group wherein one to three ring methylene groups are independently replaced by O, $S(O)_m$, $CHOH$, $>C=O$, $>C=S$ or NH;

phenyloxy or benzyloxy each being optionally partially or fully halogenated and optionally substituted with one to three C_{1-3} alkyl groups optionally partially or fully halogenated, nitrile, hydroxy C_{1-3} alkyl or aryl; or an analog of such cycloaryl group wherein one to two ring methyne groups are independently replaced by N;

cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, bicyclopentanyl, bicyclohexanyl or bicycloheptanyl, each being optionally partially or fully halogenated and optionally substituted with one to three C_{1-3} alkyl optionally partially or fully halogenated, nitrile, hydroxy C_{1-3} alkyl or aryl; or an analog of such cycloalkyl group wherein one to three ring methylene groups are independently replaced by O, $S(O)_m$, $CHOH$, $>C=O$, $>C=S$ or NH;

C_{3-10} branched or unbranched alkenyl each being optionally partially or fully halogenated, and optionally substituted with one to three C_{1-5} branched or unbranched alkyl, phenyl, naphthyl, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrrolyl, imidazolyl, pyrazolyl, thienyl, furyl, isoxazolyl or isothiazolyl, each of the aforementioned being substituted with one to five halogen, C_{1-6} alkyl which is optionally partially or fully halogenated, cyclopropanyl,

cyclobutanyl, cyclopentanyl, cyclohexanyl, cycloheptanyl, bicyclopentanyl, bicyclohexanyl and bicycloheptanyl, hydroxy, nitrile, C₁₋₃ alkyloxy which is optionally partially or fully halogenated, NH₂C(O), mono- or di(C₁₋₃alkyl)aminocarbonyl; the C₃₋₁₀ branched or unbranced alkenyl being optionally interrupted by one or more heteroatoms chosen from O, N and S(O)_m;

cyclopentenyl, cyclohexenyl, cyclohexadienyl, cycloheptenyl, cycloheptadienyl, bicyclohexenyl or bicycloheptenyl, wherein such cycloalkenyl group is optionally substituted with one to three C₁₋₃ alkyl groups;

oxo, nitrile, halogen;

silyl containing three C₁₋₄ alkyl groups optionally partially or fully halogenated; or

C₃₋₆ alkynyl branched or unbranced carbon chain optionally partially or fully halogenated, wherein one or more methylene groups are optionally replaced by O, NH or S(O)_m and wherein said alkynyl group is optionally independently substituted with one to two oxo groups, hydroxy, pyrroldinyl, pyrrolyl, tetrahydropyranyl, one or more C₁₋₄ alkyl optionally substituted by one or more halogen atoms, nitrile, morpholino, piperidinyl, piperazinyl, imidazolyl, phenyl, pyridinyl, tetrazolyl, or mono- or di(C₁₋₃alkyl)amino optionally substituted by one or more halogen atoms;

each R₂, R₄, and R₅ is

a C₁₋₆ branched or unbranced alkyl optionally partially or fully halogenated, C₁₋₆acyl, aroyl, C₁₋₄ branched or unbranced alkoxy, each being optionally partially or fully halogenated, halogen, methoxycarbonyl, C₁₋₃ alkyl-S(O)_m optionally partially or fully halogenated, or phenyl-S(O)_m;

OR₆, C₁₋₆ alkoxy, hydroxy, nitrile, nitro, halogen;

amino-S(O)_m- wherein the N atom is optionally independently mono- or di-substituted by C₁₋₆alkyl or arylC₀₋₃alkyl, or amino wherein the N atom is optionally independently mono- or di-substituted by C₁₋₃alkyl, arylC₀₋₃alkyl, C₁₋₆acyl, C₁₋₆alkyl-S(O)_m- or arylC₀₋₃alkyl-S(O)_m-, each

of the aforementioned alkyl and aryl in this subparagraph are optionally partially or fully halogenated and optionally substituted with one to two C₁₋₆ alkyl or C₁₋₆ alkoxy;

each R₃ is independently:

phenyl, naphthyl, morpholino, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrrolyl, pyrrolidinyl, imidazolyl, pyrazolyl, thiazolyl, oxazolyl, [1,3,4]oxadiazol, triazolyl, tetrazolyl, thienyl, furyl, tetrahydrofuryl, isoxazolyl, isothiazolyl, quinolinyl, isoquinolinyl, indolyl, benzimidazolyl, benzofuranyl, benzoxazolyl, benzisoxazolyl, benzpyrazolyl, benzothiophenyl, cinnolinyl, pterindinyl, phthalazinyl, naphthypyridinyl, quinoxalinyl, quinazolinyl, purinyl or indazolyl, each of the aforementioned is optionally substituted with one to three phenyl, naphthyl, heterocycle or heteroaryl as hereinabove described in this paragraph, C₁₋₆ branched or unbranched alkyl which is optionally partially or fully halogenated, cyclopropanyl, cyclobutanyl, cyclopentanyl, cyclohexanyl, cycloheptanyl, bicyclopentanyl, bicyclohexanyl, bicycloheptanyl, phenyl C₁₋₅ alkyl, naphthyl C₁₋₅ alkyl, halogen, hydroxy, oxo, nitrile, C₁₋₃ alkoxy optionally partially or fully halogenated, phenoxy, naphthoxy, heteroaryloxy or heterocyclicoxy wherein the heterocyclic or heteroaryl moiety is as hereinabove described in this paragraph, nitro, amino, mono- or di-(C₁₋₃alkyl)amino, phenylamino, naphthylamino, heteroaryl or heterocyclic amino wherein the heteroaryl heterocyclic moiety is as hereinabove described in this paragraph, NH₂C(O), a mono- or di-(C₁₋₃alkyl) aminocarbonyl, C₁₋₅ alkyl-C(O)-C₁₋₄ alkyl, amino-C₁₋₅ alkyl, mono- or di-(C₁₋₅alkyl)amino, mono- or di-(C₁₋₃alkyl)amino-C₁₋₅ alkyl, amino-S(O)₂, di-(C₁₋₃alkyl)amino-S(O)₂, R₇-C₁₋₅ alkyl, R₈-C₁₋₅ alkoxy, R₉-C(O)-C₁₋₅ alkyl, R₁₀-C₁₋₅ alkyl(R₁₁)N or carboxy-mono- or di-(C₁₋₅alkyl)-amino;

a fused aryl selected from benzocyclobutanyl, indanyl, indenyl, dihydronaphthyl, tetrahydronaphthyl, benzocycloheptanyl and benzocycloheptenyl, or a fused heteroaryl selected from cyclopentenopyridinyl, cyclohexanopyridinyl, cyclopentanopyrimidinyl, cyclohexanopyrimidinyl, cyclopentanopyrazinyl, cyclohexanopyrazinyl, cyclopentanopyridazinyl, cyclohexanopyridazinyl, cyclopentanoquinolinyl, cyclohexanoquinolinyl, cyclopentanoisoquinolinyl, cyclohexanoisoquinolinyl, cyclopentanoindolyl, cyclohexanoindolyl, cyclopentanobenzimidazolyl, cyclohexanobenzimidazolyl, cyclopentanobenzoxazolyl, cyclohexanobenzoxazolyl,

cyclopentanoimidazolyl, cyclohexanoimidazolyl, cyclopentanothienyl and cyclohexanothienyl; wherein the fused aryl or fused heteroaryl ring is independently substituted with zero to three phenyl, naphthyl, pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl, pyrrolyl, imidazolyl, pyrazolyl, thienyl, furyl, isoxazolyl, isothiazolyl, C_{1-6} alkyl which is optionally partially or fully halogenated, halogen, nitrile, C_{1-3} alkyloxy which is optionally partially or fully halogenated, phenoxy, naphthoxy, heteroaryloxy or heterocyclicoxy wherein the heteroaryl or heterocyclic moiety is as hereinabove described in this paragraph, nitro, amino, mono- or di- $(C_{1-3}\text{alkyl})$ amino, phenylamino, naphthylamino, heteroaryl or heterocyclic amino wherein the heteroaryl or heterocyclic moiety is as hereinabove described in this paragraph, $\text{NH}_2\text{C(O)}$, mono- or di- $(C_{1-3}\text{alkyl})$ aminocarbonyl, C_{1-4} alkyl- OC(O) , C_{1-5} alkyl- C(O)-C_{1-4} alkyl, amino- C_{1-5} alkyl, mono- or di- (C_{1-3}) alkylamino- C_{1-5} alkyl, $R_{12}\text{-}C_{1-5}$ alkyl, $R_{13}\text{-}C_{1-5}$ alkoxy, $R_{14}\text{-C(O)-}C_{1-5}$ alkyl or $R_{15}\text{-}C_{1-5}$ alkyl($R_{16}\text{)N}$;

cyclopropanyl, cyclobutanyl, cyclopentanyl, cyclohexanyl, cycloheptanyl, bicyclopentanyl, bicyclohexanyl or bicycloheptanyl, each being optionally be partially or fully halogenated and optionally substituted with one to three C_{1-3} alkyl groups, or an analog of such cycloalkyl group wherein one to three ring methylene groups are independently replaced by O, S, CHOH , $>\text{C=O}$, $>\text{C=S}$ or NH;

cyclopentenyl, cyclohexenyl, cyclohexadienyl, cycloheptenyl, cycloheptadienyl, bicyclohexenyl or bicycloheptenyl, each optionally substituted with one to three C_{1-3} alkyl groups;

C_{1-4} alkyl-phenyl- $\text{C(O)-}C_{1-4}$ alkyl-, C_{1-4} alkyl- $\text{C(O)-}C_{1-4}$ alkyl- or C_{1-4} alkyl-phenyl- $\text{S(O)}_m\text{-}C_{1-4}$ alkyl-;

C_{1-6} alkyl or C_{1-6} branched or unbranched alkoxy each of which is optionally partially or fully halogenated or optionally substituted with R_{17} ;

OR_{18} or C_{1-6} alkyl optionally substituted with OR_{18} ;

amino or mono- or di- $(C_{1-5}\text{alkyl})$ amino optionally substituted with R_{19} ;

$R_{20}C(O)N(R_{21})$ -, $R_{22}O$ - or $R_{23}R_{24}NC(O)$ -; $R_{26}(CH_2)_mC(O)N(R_{21})$ -, $R_{23}R_{24}NC(O)-C_{1-3}$ alkoxy or $R_{26}C(O)(CH_2)_mN(R_{21})$ -;

C_{2-6} alkenyl substituted by $R_{23}R_{24}NC(O)$ -;

C_{2-6} alkynyl branched or unbranched carbon chain, optionally partially or fully halogenated, wherein one or more methylene groups are optionally replaced by O, NH, $S(O)_m$ and wherein said alkynyl group is optionally independently substituted with one to two oxo groups, pyrroldinyl, pyrrolyl, morpholino, piperidinyl, piperazinyl, imidazolyl, phenyl, pyridinyl, tetrazolyl one or more C_{1-4} alkyl optionally substituted by one or more halogen atoms, nitrile, morpholino, piperidinyl, piperazinyl, imidazolyl, phenyl, pyridinyl, tetrazolyl, or mono- or di(C_{1-4} alkyl)amino optionally substituted by one or more halogen atoms;

C_{1-6} acyl or aroyl;

R_6 is a:

C_{1-4} alkyl optionally partially or fully halogenated and optionally substituted with R_{26} ;

each R_7 , R_8 , R_9 , R_{10} , R_{12} , R_{13} , R_{14} , R_{15} , R_{17} , R_{19} , R_{25} and R_{26} is independently: nitrile, phenyl, morpholino, piperidinyl, piperazinyl, imidazolyl, pyridinyl, tetrazolyl, amino or mono- or di- $(C_{1-4}$ alkyl)amino optionally partially or fully halogenated;

each R_{11} and R_{16} is independently:

hydrogen or C_{1-4} alkyl optionally partially or fully halogenated;

R_{18} is independently:

hydrogen or a C_{1-4} alkyl optionally independently substituted with oxo or R_{25} ;

R_{20} is independently:

C_{1-10} alkyl optionally partially or fully halogenated, phenyl, or pyridinyl;

R_{21} is independently:

hydrogen or C_{1-3} alkyl optionally partially or fully halogenated;

each R₂₂, R₂₃ and R₂₄ is independently:

hydrogen, C₁₋₆ alkyl optionally partially or fully halogenated, said C₁₋₆ alkyl is optionally interrupted by one or more O, N or S, said C₁₋₆ alkyl also being independently optionally substituted by mono- or di-(C₁₋₃alkyl)aminocarbonyl, phenyl, pyridinyl, amino or mono- or di-(C₁₋₄alkyl)amino each of which is optionally partially or fully halogenated and optionally substituted with mono- or di-(C₁₋₃alkyl)amino;
or R₂₃ and R₂₄ taken together optionally form a heterocyclic or heteroaryl ring;

m = 0, 1 or 2;

W is O or S and

the pharmaceutically acceptable derivatives thereof.

Claim 9 (original): The compound according to claim 8 wherein:

W is O .

Claim 10 (currently amended): The compound according to claim 9 wherein

G is phenyl, ~~pyridinyl, pyridonyl, naphthyl, quinoliny, isoquinoliny, pyrazinyl, benzimidazolyl, benzoazazolyl, benzoazazolonyl, benzofuranyl, benzothiophenyl, benzpyrazolyl, dihydrobenzofuranyl, dihydrobenzothiophenyl, 3,4-dihydro-2H-benzo[1,4]oxazinyl, indanyl or, indenyl, indolyl, indolinyl, indolonyl, 2,3-dihydro-1H-indolyl or indolinonyl~~, wherein G is optionally substituted by one or more R₁, R₂ or R₃;

Ar is:

naphthyl, ~~quinoliny, isoquinoliny, tetrahydronaphthyl, tetrahydroquinoliny, tetrahydriisoquinoliny~~, indanyl or, indenyl or ~~indolyl~~ each being optionally substituted by one or more R₄ or R₅ groups;

X is:

~~phenyl, furanyl, thieryl, pyrrolyl, pyrazolyl, imidazolyl, pyridinyl, pyrimidinyl, pyridinonyl, dihydropyridinonyl, maleimidyl, dihydromaleimidyl, piperdanyl, piperazinyl, pyridazinyl or pyrazinyl; each being optionally independently substituted with one to three C₁₋₄ alkyl, C₁₋₄ alkoxy, hydroxy, nitrile, amino, mono- or di-(C₁₋₃ alkyl)amino, mono- or di-(C₁₋₃ alkylamino)carbonyl, NH₂C(O), C₁₋₆ alkyl-S(O)_m or halogen;~~

Y is:

a bond or

a C₁₋₄ saturated or unsaturated carbon chain wherein one or more of the C atoms is optionally replaced by O, N, or S(O)_m and wherein Y is optionally independently substituted with one to two oxo groups, nitrile, phenyl or one or more C₁₋₄ alkyl optionally substituted by one or more halogen atoms;

Z is:

nitrile, nitrileC₁₋₃ alkyl, C₁₋₆ alkyl-S(O)_m, halogen, hydroxy, C₁₋₃ alkyl, C₁₋₃ acylamino, C₁₋₄ alkoxy, amino, mono- or di-(C₁₋₃ alkyl)aminocarbonyl, or amino mono or di-substituted by aminoC₁₋₆ alkyl or C₁₋₃alkoxyC₁₋₃alkyl;

each R₁ is independently:

C₁₋₆ alkyl branched or unbranched optionally partially or fully halogenated, wherein one or more C atoms are optionally independently replaced by O, N or S(O)_m, and wherein said C₁₋₆ alkyl is optionally substituted with one to three C₃₋₆cycloalkyl, oxo, phenyl, dioxolanyl, pyrrolidinyl, furyl, isoxazolyl or isothiazolyl; each of the aforementioned being optionally substituted with one to three groups selected from halogen, C₁₋₃ alkyl which is optionally partially or fully halogenated, hydroxy, nitrile and C₁₋₃alkoxy which is optionally partially or fully halogenated;

cyclopropyl, cyclobutyl, cyclopentanyl, cyclohexanyl, bicyclopentanyl or bicyclohexanyl, each being optionally partially or fully halogenated and optionally substituted with one to three C₁₋₃ alkyl groups optionally partially or fully halogenated, nitrile, hydroxyC₁₋₃alkyl or phenyl; or an analog of such cycloalkyl group wherein one to three ring methylene groups are independently replaced by O, S, CHO, >C=O, >C=S or NH;

oxo;

C_{3-6} alkynyl branched or unbranched carbon chain optionally partially or fully halogenated, wherein one or more methylene groups are optionally replaced by O, NH or $S(O)_m$ and wherein said alkynyl group is optionally independently substituted with one to two oxo groups, hydroxy, pyrroldinyl, pyrrolyl, tetrahydropyranyl, C_{1-4} alkyl optionally substituted by one or more halogen atoms, nitrile, morpholino, piperidinyl, piperazinyl, imidazolyl, phenyl, pyridinyl, tetrazolyl, or mono- or di(C_{1-3} alkyl)amino optionally substituted by one or more halogen atoms;

or

silyl containing three C_{1-4} alkyl groups optionally partially or fully halogenated;

R_2 is independently:

a C_{1-5} branched or unbranched alkyl optionally partially or fully halogenated, acetyl, aroyl, C_{1-4} branched or unbranched alkoxy, each being optionally partially or fully halogenated, halogen, methoxycarbonyl, C_{1-2} alkyl- $S(O)_m$ optionally partially or fully halogenated, or phenyl- $S(O)_m$;

C_{1-3} alkoxy, hydroxy, nitrile, nitro, halogen;

amino- $S(O)_m$ - wherein the N atom is optionally independently mono- or di-substituted by C_{1-3} alkyl or aryl C_{0-3} alkyl, or amino wherein the N atom is optionally independently mono- or di-substituted by C_{1-3} alkyl, aryl C_{0-3} alkyl, C_{1-3} acyl, C_{1-4} alkyl- $S(O)_m$ - or aryl C_{0-3} alkyl- $S(O)_m$ -, each of the aforementioned alkyl and aryl in this subparagraph are optionally partially or fully halogenated and optionally substituted with one to two C_{1-3} alkyl or C_{1-3} alkoxy;

R_3 is independently:

phenyl, morpholino, pyridinyl, pyrimidinyl, pyrazinyl, pyrrolyl, pyrrolidinyl, imidazolyl, [1,3,4]oxadiazol, pyrazolyl, each is optionally substituted with one to three phenyl, naphthyl, heterocycle or heteroaryl as hereinabove described in this paragraph, C_{1-6} alkyl which is

optionally partially or fully halogenated, cyclopropanyl, cyclobutanyl, cyclopentanyl, cyclohexanyl, cycloheptanyl, bicyclopentanyl, bicyclohexanyl, bicycloheptanyl, phenyl C₁₋₅ alkyl, naphthyl C₁₋₅ alkyl, halogen, oxo, hydroxy, nitrile, C₁₋₃ alkoxy optionally partially or fully halogenated, phenoxy, naphthoxy, heteroaryloxy or heterocyclicoxy wherein the heteroaryl or heterocyclic moiety is as hereinabove described in this paragraph, nitro, amino, mono- or di-(C₁₋₃alkyl)amino, phenylamino, naphthylamino, heteroaryl or heterocyclic amino wherein the heteroaryl or heterocyclic moiety is as hereinabove described in this paragraph, NH₂C(O), a mono- or di-(C₁₋₃alkyl)aminocarbonyl, C₁₋₅ alkyl-C(O)-C₁₋₄ alkyl, mono- or di-(C₁₋₃alkyl)amino, mono- or di-(C₁₋₃)alkylamino-C₁₋₅ alkyl, mono- or di-(C₁₋₃alkyl)amino-S(O)₂, R₇-C₁₋₅ alkyl, R₈-C₁₋₅ alkoxy, R₉-C(O)-C₁₋₅ alkyl, R₁₀-C₁₋₅ alkyl(R₁₁)N or carboxy-mono- or di-(C₁₋₅)-alkyl-amino;

C₁₋₃ alkyl or C₁₋₄ alkoxy each being optionally partially or fully halogenated or optionally substituted with R₁₇;

OR₁₈ or C₁₋₆ alkyl optionally substituted with OR₁₈;

amino or mono- or di- (C₁₋₅ alkyl)amino optionally substituted with R₁₉;

R₂₀C(O)N(R₂₁)-, R₂₂O- ; R₂₃R₂₄NC(O)-; R₂₆CH₂C(O)N(R₂₁)-, R₂₃R₂₄NC(O)-C₁₋₂alkoxy or R₂₆C(O)CH₂N(R₂₁)-;

C₂₋₄alkenyl substituted by R₂₃R₂₄NC(O)-; or

C₂₋₄ alkynyl branched or unbranched carbon chain optionally partially or fully halogenated wherein one of the methylene groups is optionally replaced by O, and optionally independently substituted with one to two oxo groups, pyrroldinyl, pyrrolyl, morpholino, piperidinyl, piperazinyl, imidazolyl, phenyl, pyridinyl, tetrazolyl or one or more C₁₋₄ alkyl optionally substituted by one or more halogen atoms;

C₁₋₃acyl; and

R_{23} and R_{24} taken together optionally form imidazolyl, piperidinyl, morpholino, piperazinyl or a pyridinyl ring.

Claim 11 (currently amended): The compound according to claim 10 wherein:

G is

phenyl, pyridinyl, pyridonyl, naphthyl or quinolinyl, isoquinolinyl, pyrazinyl, 3,4-dihydro-2H-benzo[1,4]oxazinyl, benzothiophenyl, dihydrobenzofuranyl, dihydrobenzothiophenyl, benzooxazoly, indanyl, indoly, indolinyl, indolonyl or indolomonyl, wherein G is optionally substituted by one or more R_1 , R_2 or R_3 ;

Ar is naphthyl;

X is

phenyl, imidazolyl, pyridinyl, pyrimidinyl, piperidinyl, piperazinyl, pyridazinyl or pyrazinyl each being optionally independently substituted with one to three C_{1-4} alkyl, C_{1-4} alkoxy, hydroxy, nitrile, amino, mono- or di- $(C_{1-3}$ alkyl)amino, mono- or di- $(C_{1-3}$ alkylamino)carbonyl, $NH_2C(O)$, C_{1-6} alkyl $S(O)_m$ or halogen;

Y is:

a bond or

a C_{1-4} saturated carbon chain wherein one or more of the C atoms is optionally replaced by O, N or S and wherein Y is optionally independently substituted with nitrile or oxo;

Z is:

hydroxy, C_{1-3} alkyl, C_{1-3} alkoxy, C_{1-3} acylamino, C_{1-3} alkylsulfonyl, nitrile C_{1-3} alkyl or amino mono or di-substituted by C_{1-3} alkoxy C_{1-3} alkyl;

each R_1 is independently:

C_{1-5} alkyl branched or unbranched optionally partially or fully halogenated, wherein one or more C atoms are optionally independently replaced by O, N or $S(O)_m$, and wherein said C_{1-5} alkyl is optionally substituted with oxo, dioxolanyl, pyrrolidinyl, furyl or phenyl each

optionally substituted with one to three halogen, C₁₋₃ alkyl which is optionally partially or fully halogenated, hydroxy, nitrile and C₁₋₃alkoxy which is optionally partially or fully halogenated;

cyclopropyl, cyclobutyl, cyclopentanyl, cyclohexanyl, bicyclopentanyl or bicyclohexanyl, each being optionally partially or fully halogenated and optionally substituted with one to three C₁₋₃ alkyl groups optionally partially or fully halogenated, nitrile, hydroxyC₁₋₃alkyl or phenyl; and an analog of cyclopropyl, cyclobutyl, cyclopentanyl, cyclohexanyl, bicyclopentanyl or bicyclohexanyl wherein one ring methylene group is replaced by O;

oxo;

C₂₋₄ alkynyl optionally partially or fully halogenated wherein one or more methylene groups are optionally replaced by O, and optionally independently substituted with one to two oxo groups, hydroxy, pyrroldinyl, pyrrolyl, tetrahydropyranyl, C₁₋₄ alkyl optionally substituted by one or more halogen atoms, nitrile, morpholino, piperidinyl, piperazinyl, imidazolyl, phenyl, pyridinyl, tetrazolyl, or mono- or di(C₁₋₃alkyl)amino optionally substituted by one or more halogen atoms;

or

silyl containing three C₁₋₂ alkyl groups optionally partially or fully halogenated;

each R₃ is independently:

phenyl, morpholino, pyridinyl, pyrimidinyl, pyrrolidinyl, 2,5-pyrrolidin-dionyl, imidazolyl, [1,3,4]oxadiazol, pyrazolyl, each of the aforementioned is optionally substituted with one to three C₁₋₃ alkyl which is optionally partially or fully halogenated, halogen, oxo, hydroxy, nitrile or C₁₋₃ alkoxy optionally partially or fully halogenated;

C₁₋₃ alkyl or C₁₋₃ alkoxy optionally partially or fully halogenated or optionally substituted with R₁₇;

OR₁₈ or C₁₋₃ alkyl optionally substituted with OR₁₈;
amino or mono- or di-(C₁₋₃ alkyl)amino optionally substituted with R₁₉;

R₂₀C(O)N(R₂₁)-, R₂₂O- ; R₂₃R₂₄NC(O)-; R₂₆CH₂C(O)N(R₂₁)-, NH₂C(O)methoxy or R₂₆C(O)CH₂N(R₂₁)-;

C₂₋₄ alkenyl substituted by R₂₃R₂₄NC(O)-; or

C₂₋₄ alkynyl substituted with pyrroldinyl or pyrrolyl;

C₁₋₃acyl and

R₂₃ and R₂₄ taken together optionally form morpholino.

Claim 12 (currently amended): The compound according to claim 11 wherein

G is phenyl, ~~pyridinyl, pyridonyl, 2-naphthyl or~~ ~~quinolinyl, isoquinolinyl, dihydrobenzofuranyl, indanyl, 5-indolyl, 3-oxo-3,4-dihydro-2H-benzo[1,4]oxazin-8-yl, benzooxalolyl, 2,3-dihydrobenzooxazol-7-yl, 2-oxo-2,3-dihydro-1H-indol-5-yl, indolinyl, indolonyl, or indolinonyl~~, wherein G is optionally substituted by one or more R₁, R₂ or R₃;

Ar is 1-naphthyl;

X is:

~~phenyl, imidazolyl, pyridinyl, pyrimidinyl, piperdanyl, piperazinyl, pyridazinyl or pyrazinyl;~~

Y is:

a bond or

-CH₂- , -CH₂CH₂- , -C(O)-, -O-, -S-, -NH-CH₂CH₂CH₂- , -N(CH₃)-,
CH₂(CN)CH₂-NH-CH₂ or -NH-;

Z is

hydroxy, C₁₋₃alkyl, N,N-diC₁₋₃alkoxyC₁₋₃alkylamino, C₁₋₃acylamino, C₁₋₃alkylsulfonyl or nitrileC₁₋₃alkyl;

each R₁ is independently:

C₁₋₅ alkyl optionally partially or fully halogenated wherein one or more C atoms are optionally independently replaced by O or N, and wherein said C₁₋₅ alkyl is optionally substituted with oxo, dioxolanyl, pyrrolidinyl, furyl or phenyl optionally substituted by C₁₋₃alkoxy;

cyclopropyl, cyclopentanyl, cyclohexanyl or bicyclopentanyl optionally substituted with one to three methyl groups optionally partially or fully halogenated, nitrile, hydroxymethyl or phenyl; or 2-tetrahydrofuranyl substituted by methyl; or trimethyl silyl;

propynyl substituted hydroxy or tetrahydropyran-2-yloxy;

each R₃ is independently:

phenyl, morpholino, pyridinyl, pyrimidinyl, pyrrolidinyl, 2,5-pyrrolidin-dionyl, imidazolyl, [1,3,4]oxadiazol or pyrazolyl, each is optionally substituted with C₁₋₂ alkyl which is optionally partially or fully halogenated;

C₁₋₃ alkyl or C₁₋₃ alkoxy each being optionally partially or fully halogenated or optionally substituted with diethylamino;

OR₁₈ or C₁₋₃ alkyl optionally substituted with OR₁₈;

amino or mono- or di-(C₁₋₃ alkyl)amino optionally substituted with R₁₉;

CH₃C(O)NH-, R₂₂O- ; R₂₃R₂₄NC(O)-; R₂₆CH₂C(O)N(R₂₁)-, NH₂C(O)methoxy or R₂₆C(O)CH₂N(R₂₁)-;

C₂₋₄alkenyl substituted by R₂₃R₂₄NC(O)-; or

C_{2-4} alkynyl substituted with pyrroldinyl or pyrrolyl;

C_{1-2} acyl; and

R_{23} and R_{24} are H or R_{23} and R_{24} taken together optionally form morpholino; and

R_{26} is morpholino.

Claim 13 (currently amended): The compound according to claim 12 wherein

G is

phenyl, ~~pyridinyl, 5-indolyl, 3-oxo 3,4-dihydro 2H-benzo[1,4]oxazin-8-yl, benzo[1,3]oxazol-2,3-dihydrobenzo[1,3]oxazol-7-yl, 2-oxo 2,3-dihydro 1H-indol-5-yl~~ or 2-naphthyl wherein G is optionally substituted by one or more R_1 , R_2 or R_3 ;

X is:

imidazolyl, pyridinyl, pyrimidinyl or pyrazinyl;

Y is:

a bond, $CH_2(CN)CH_2-NH-CH_2$, $-CH_2-$, $-NH-CH_2CH_2CH_2-$ or $-NH-$;

Z is hydroxy, methyl, N,N-dimethoxyethylamino, acetylamino, methylsulfonyl or cyanoethyl;

each R_1 is independently:

tert-butyl, sec-butyl, tert-amyl, phenyl, tetrahydropyran-2-yloxypropynyl, hydroxypropynyl, trihalomethyl, 2,2-diethylpropionyl or cyclohexanyl;

R_2 is chloro, nitro, amino, nitrile, methylsulfonylamino, diacetylamino, phenylsulfonylamino, N,N-di(methylsulfonyl)amino, methylsulfonyl or trihalomethylsulfonyl;

R_3 is independently:

methyl, C₁₋₃ alkoxy, methoxymethyl, hydroxypropyl, dimethylamino, C₁₋₄alkylamino, NH₂C(O)methoxy, acetyl, pyrrolidinyl, imidazolyl, pyrazolyl, morpholino or morpholinocarbonyl.

Claim 14 (original): The compound according to claim 13 wherein X is pyridinyl.

Claim 15 (original): The compound according to claim 14 wherein the pyridinyl is attached to Ar via the 3-pyridinyl position.

Claim 16 (original): A compound selected from:

1-(5-tert-Butyl-2-methyl-phenyl)-3-(4-{6-[(3-methoxy-propyl)-methyl-amino]-pyridin-3-yl}-naphthalen-1-yl)-urea;

1-(5-tert-Butyl-2-methoxy-phenyl)-3-[4-(6-hydroxymethyl-pyridin-3-yl)-naphthalen-1-yl]-urea;

1-(3-Amino-5-tert-butyl-2-methoxy-phenyl)-3-[4-(6-methyl-pyridin-3-yl)-naphthalen-1-yl]-urea;

1-[4-(6-{[Bis-(2-methoxy-ethyl)-amino]-methyl}-pyridin-3-yl)-naphthalen-1-yl]-3-(5-tert-butyl-2-methoxy-phenyl)-urea;

N-(5-{4-[3-(5-tert-Butyl-2-methyl-phenyl)-ureido]-naphthalen-1-yl}-pyrazin-2-yl)-methanesulfonamide;

1-[4-(6-{[Bis-(2-cyano-ethyl)-amino]-methyl}-pyridin-3-yl)-naphthalen-1-yl]-3-(5-tert-butyl-2-methoxy-phenyl)-urea;

and

N-(5-{4-[3-(5-tert-Butyl-2-methoxy-phenyl)-ureido]-naphthalen-1-yl}-pyridin-2-yl)-acetamide

or the pharmaceutically acceptable derivatives thereof.

Claim 17 (original): A pharmaceutical composition comprising a pharmaceutically effective amount of a compound according to claims 1, 8 or 16.

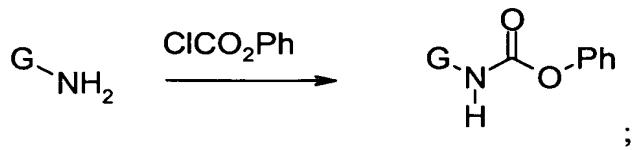
Claim 18 (withdrawn): A method of treating a disease mediated by cytokines which comprises administering to a patient in need of such treatment a therapeutically effective amount of a compound according to claims 1, 8 or 16.

Claim 19 (withdrawn): The method according to claim 18 wherein the cytokine-mediated disease is selected from rheumatoid arthritis, osteoarthritis, Crohn's disease, ulcerative colitis, multiple sclerosis, Guillain-Barre syndrome, psoriasis, graft versus host disease, systemic lupus erythematosus, diabetes, toxic shock syndrome, osteoporosis, Alzheimer's disease, acute and chronic pain, contact dermatitis and atherosclerosis.

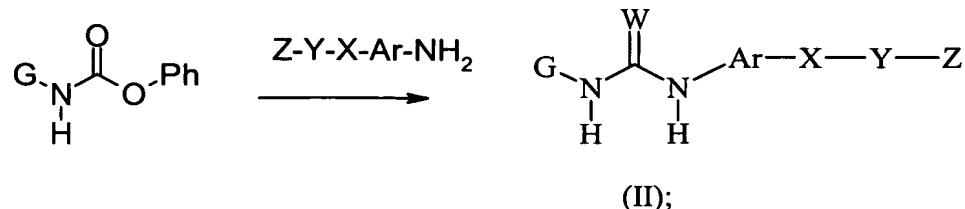
Claim 20 (withdrawn): A method of treating a neutrophil-mediated disease selected from stroke, myocardial infarction, thermal injury, adult respiratory distress syndrome (ARDS), multiple organ injury secondary to trauma, acute glomerulonephritis, dermatoses with acute inflammatory components, acute purulent meningitis, hemodialysis, leukopheresis, granulocyte transfusion associated syndromes and necrotizing enterocolitis, which comprises administering to a patient in need of such treatment a therapeutically effective amount of a compound according to claims 1, 8 or 16.

Claim 21 (withdrawn): A method of making a compound of the formula(II) according to claim 1, comprising:

a) reacting an arylamine with phenyl chloroformate in a suitable halogenated solvent with a suitable base at 0 – 85°C for about 2 – 24 hours:



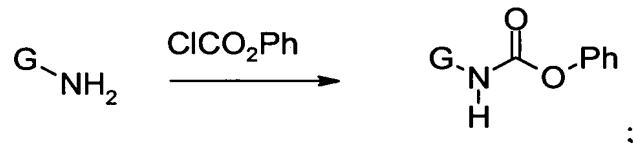
b) isolating and subsequently reacting the product of step a) with an arylamine shown below in a non-protic anhydrous solvent at 0 – 110°C for about 2 – 24 hours, to produce a compound of the formula (II):



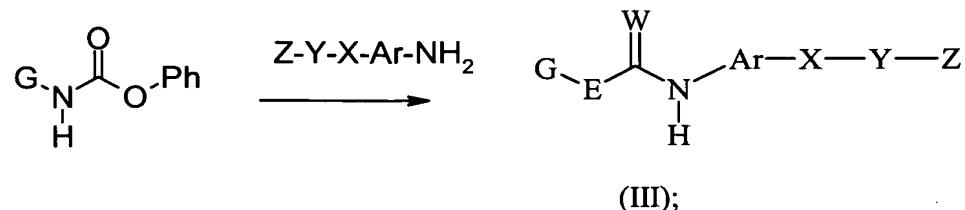
wherein W is O and G, Ar, X, Y and Z are as defined in claim 1.

Claim 22 (withdrawn): A method of making a compound of the formula(III) according to claim 8, comprising:

a) reacting an arylamine with phenyl chloroformate in a suitable halogenated solvent with a suitable base at 0 – 85°C for about 2 – 24 hours:



b) isolating and subsequently reacting the product of step a) with an arylamine shown below in a non-protic anhydrous solvent at 0 – 110°C for about 2 – 24 hours, to produce a compound of the formula (III):



wherein E is N-H, W is O and G, Ar, X, Y and Z are as defined in claim 8.